

2008



WaterQuality

REPORT

Every day more than 100,000 citizens in Lynchburg and the surrounding communities depend on clean, safe drinking water. The Lynchburg Department of Utilities is proud to present you with specific information about your drinking water because it demonstrates how hard work pays off. This report shows that your drinking water is even better than the federal and state standards for safety and purity. In fact, the City's water has always been in compliance with regulations.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about



contaminants and potential health effects can be obtained from the U.S. Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline at 1-800-426-4791 and www.epa.gov.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

our mission: *To provide excellent water and wastewater services that promote the health, safety, and prosperity of the community.*

Contaminants that may be present in source water include:

Microbial Contaminants:

Viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic Contaminants:

Salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides & Herbicides:

May come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic Chemical Contaminants:

Includes synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants:

Can be naturally occurring or be the result of oil and gas production and mining activities.



Do you know how often you turn me on?

If only the water faucet could talk to us. It might remind us how often we turn to it for safe water to drink, to wash our clothes, to prepare our food, to provide us with the everyday quality of life we enjoy. It might remind us that the water pipes below our streets make so many everyday conveniences possible.

Our water bills pay to keep our community tap water safe, reliable, and there for us—24/7 without fail. For more information about what your tap water delivers, visit the Utilities Department's web page via the City's web site at www.lyncburgva.gov.

Only Tap Water Delivers



Presented in cooperation with

Where does our water come from?

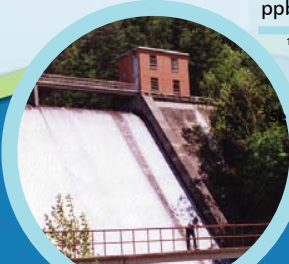
The City is fortunate to have two plentiful sources of good water. Lynchburg's primary water source is the 125-acre Pedlar Reservoir in Amherst County. The water from Pedlar flows 22 miles by gravity to the City's two filtration plants. At times, water is also drawn from the James River.

Both Pedlar and James River water are cleaned with the same treatment process, and both provide the clean, clear water that we are so lucky to have.

Source Water Assessment

The Virginia Department of Health conducted a source water assessment of our system in 2002 in accordance with the 1996 amendments to the Safe Drinking Water Act. Based upon the criteria developed by the State in its Source Water Assessment Program, both of our surface water sources were classified as highly susceptible to contamination as a result of land use activities and potential sources of contamination in the assessment areas. However, this does not mean that our sources have or will be impacted. It does mean that if there were to be a release of pollutants in the assessment area, the source water could be impacted.

The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. For answers to questions or copies of the report contact Leslie Gryder in the Utilities Department at 455-4263.



What were this year's test results?

The City of Lynchburg constantly monitors for constituents in your drinking water in accordance with federal and state regulations. **We are happy to inform you that your drinking water meets or exceeds all federal and state requirements.** The table below shows what constituents were detected from January 2007 to December 2007. The EPA has determined that your water is completely safe at these levels.

Constituents/ Unit of Measure	Level Violation	Detected	AL	MCLG	MCL	MDRL	Likely Source of Contamination
Inorganic Contaminants:							
Chlorine, ppm	No	1.1 (highest average) 0 - 2.1 (range)	—	—	—	4	water additive to control microbes
Copper, ppm ⁴	No	0.065 (90th percentile) 0 above action level	1.3	1.3	—	—	corrosion of household plumbing systems, erosion of natural deposits
Fluoride, ppm	No	0.80 (average) 0 - 1.3 (range)	—	4	4	—	erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead, ppb ⁴	No	3.0 (90th percentile) 0 above action level	15	0	—	—	corrosion of household plumbing systems, erosion of natural deposits
Nitrate + Nitrite (as Nitrogen), ppm	No	0.10 - 0.11	—	10	10	—	runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits
Microbiological Contaminants:							
Total Coliform Bacteria, presence or absence	No	1.2% (monthly samples positive) (highest monthly average)	—	0	5% (monthly samples positive)	—	naturally present in the environment
Turbidity, NTU	No	0.10 (highest level) 100% < 0.3	—	N/A	TT	—	soil runoff
<i>NOTE: No single sample can be greater than 1 NTU. At least 95% of the samples taken every month must be less than 0.3 NTU.</i>							
Volatile Organic Contaminants:							
Trihalomethanes (TTHM), ppb	No	63 (highest average) 18 - 158 (range)	—	0	80	—	by-product of drinking water disinfection
Haloacetic Acids (HAA), ppb	No	31 (highest average) 5 - 79 (range)	—	0	60	—	by-product of drinking water disinfection
Radioactive Contaminants:							
Gross Alpha Emitters, pCi/L ¹	No	0.0 - 0.7	—	0	15	—	erosion of natural deposits
Gross Beta Emitters, pCi/L ¹	No	0.5 - 0.8	—	0	50	—	decay of natural and man-made deposits
Radium 228 Emitters, pCi/L ¹	No	0.3 - 0.6	—	0	5	—	erosion of natural deposits
Disinfection By-Product Precursor Contaminants:							
Total Organic Carbon, ppm (TOC) Raw Water, ppm	No	2.0 (highest average) 1.2 - 3.6 (range of results)	—	N/A	TT	—	naturally present in the environment
Total Organic Carbon, ppm (TOC) Treated Water, ppm	No	1.2 (highest average) 0.7 - 2.3 (range of results)	—	N/A	TT	—	naturally present in the environment
<i>NOTE: The Disinfectants and Disinfection By-Products Rule provides several alternative compliance criteria besides TOC removal ratios. We did not report TOC removal ratios because we met an alternative compliance criterion. The alternative compliance criterion that we use is §141.135(a)(2)(ii). Our treated water TOC levels are <2.0 ppm.</i>							
Unregulated Contaminants²:							
Sulfate, ppm	No	8.1 (average) 8.05 - 8.10 (range of results)	—	N/A	250 ³	—	naturally present in the environment
Chloroform, ppb	No	11.1 (average) 9.1 - 13.0 (range of results)	—	N/A	N/A	—	by-product of drinking water disinfection
Bromodichloromethane, ppb	No	1.2 (average) 1.0 - 1.4 (range of results)	—	N/A	N/A	—	by-product of drinking water disinfection

¹ Results from 2003.

² Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

³ Secondary contaminant level: non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

⁴ Results from 2006.

Glossary of Terms:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Constituents and Contaminants: Any substances, whether naturally occurring or otherwise, that are found in a public water source. All water, including bottled water, contains certain levels of contaminants; however, the water is not considered unhealthy unless the contaminants exist in concentrations that surpass certain levels. Sometimes additives are present as by-products of the purification process or introduced to promote public health (e.g., fluoride, chlorine).

Maximum Contaminant Level (MCL): The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible, using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The "goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Disinfection Residual Level (MDRL): The maximum level of disinfectant allowed in the water distribution system.

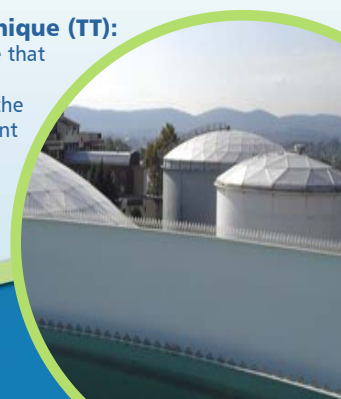
Nephelometric Turbidity Unit (NTU): Measure of the clarity of water. Turbidity in excess of five NTUs is barely noticeable to the average person.

Parts per million (ppm) or Milligrams per liter (mg/l): Ratio that corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter: Ratio that corresponds to one minute in 2,000 years or a single penny in \$10 million.

Picocuries per liter (pCi/l): Measure of radioactivity in water.

Treatment Technique (TT): Treatment technique that is a required process intended to reduce the level of a contaminant in drinking water.





Are some people more sensitive to contaminants?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants, can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers.

EPA/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline: 1-800-426-4791.

Award Winning Utilities

The City of Lynchburg Utilities Department has earned the Virginia Department of Health's (VDH) prestigious *Excellence in Waterworks Operations Award* and, for the second year in a row, the *Excellence in Waterworks Performance Award*.

Each year, the VDH Office of Drinking Water Recognition Program rewards water systems that have demonstrated excellence in performance operations and for the treatment and distribution of drinking water to the public.

Excellence in performance and operations involve setting and achieving goals well beyond the established regulations and making a commitment to customer satisfaction.



Backflow & Cross Connection

Backflow is when water is flowing in the opposite direction from its normal flow. This can occur when the water supply pressure drops below normal. A drop in pressure can be caused by a water main break or water being used for fire fighting.

A cross connection is any arrangement of pipes, fittings, fixtures, or devices that directly or indirectly connects a non-potable system to a potable water system.

- **Potable water** is water that is safe for human consumption and is aesthetically pleasing.
- **Non-Potable water** is not safe for human consumption. It is any liquid, solid or gas that can be diluted, dissolved, suspended, or mixed with water that adversely affects the quality of water.

Did you know that a garden hose is one of the most common forms of cross connection? Every year we attach fertilizers, pesticides, and cleaners to garden hoses without realizing the danger we pose to ourselves and our neighbors. Under backflow conditions, what your garden hose is connected to could backflow into your home and pollute or contaminate your drinking water.

Several ways to help prevent backflow:

- Never submerge hoses in buckets, pools, tubs, or sinks. Always keep the hose end 2 inches above the rim.
- Always keep the end of the hose clear of contaminants.
- Never use spray attachments without a backflow protection device. Many lawn chemicals are toxic and can be fatal if ingested.
- Install inexpensive backflow devices such as hose bib vacuum breakers on all threaded faucets around your home.
- Install an approved backflow prevention device on your automatic irrigation system.

If you don't want to drink it, don't connect your water system to it. Call the Cross Connection Inspector at 455-4261 and make an appointment for a home visit. We will provide and install one free hose bibb vacuum breaker.

What if I have questions?

If you have any questions or comments concerning information within this report, please contact Leslie Gryder at 455-4263. For water or sewer emergencies, general inquiries, and tours, please contact the Utilities Department at 455-4250.

NOTE: Tours of the College Hill or Abert Water filtration plants are available upon request to school, civic, neighborhood, and other groups. Utility Department personnel are available for group presentations on water supply, treatment, and quality.